ZIG-ZAG TRANSITION

MAGNETIZATION

WRITTEN TRANSITION POSITION

TRANSITION GEOMETRY

FIG. 1

WRITTEN
TRANSITION
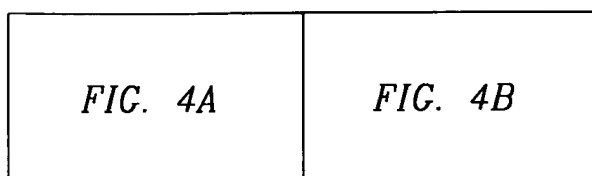POSITION
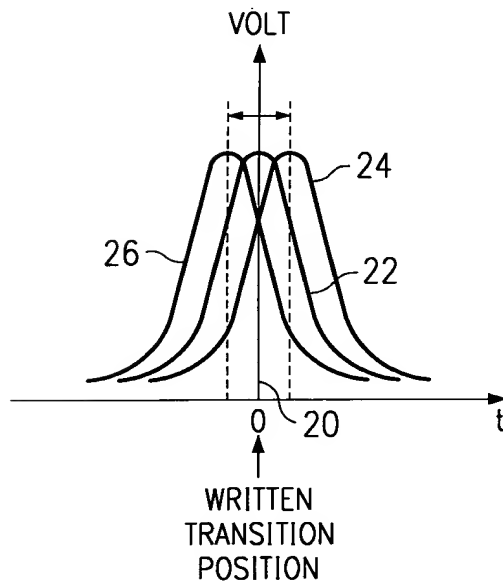
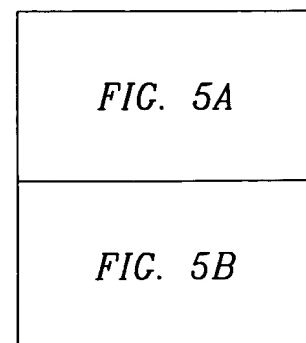POSITION JITTER

FIG. 2
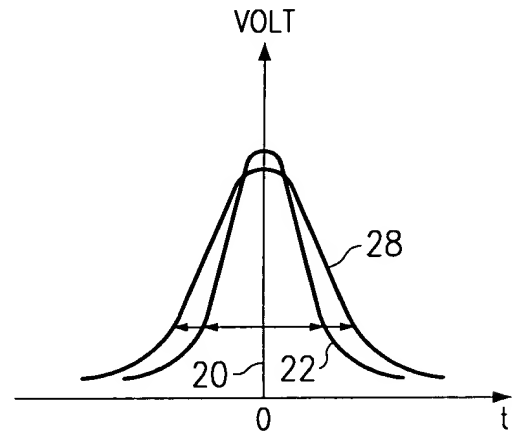
WIDTH VARIATION

FIG. 3

FIG. 4A   *FIG. 4B*

FIG. 4

FIG. 5A

FIG. 5B

FIG. 5

FIG. 4A

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OUT

73

OUTPUT
MODIFICATION

71

49

CORRECTION
ĉ(0)

70

POLARITY CHECK A

66

64

+
−

VthA=2.50

$f_{exA}(6)$

CORRECTION
ĉ(0) ĉ(1)

80

74

+
−

VthB=2.25

$f_{exB}(6)$

POLARITY CHECK B

76

FIG. 4B

FROM FIG. 4A
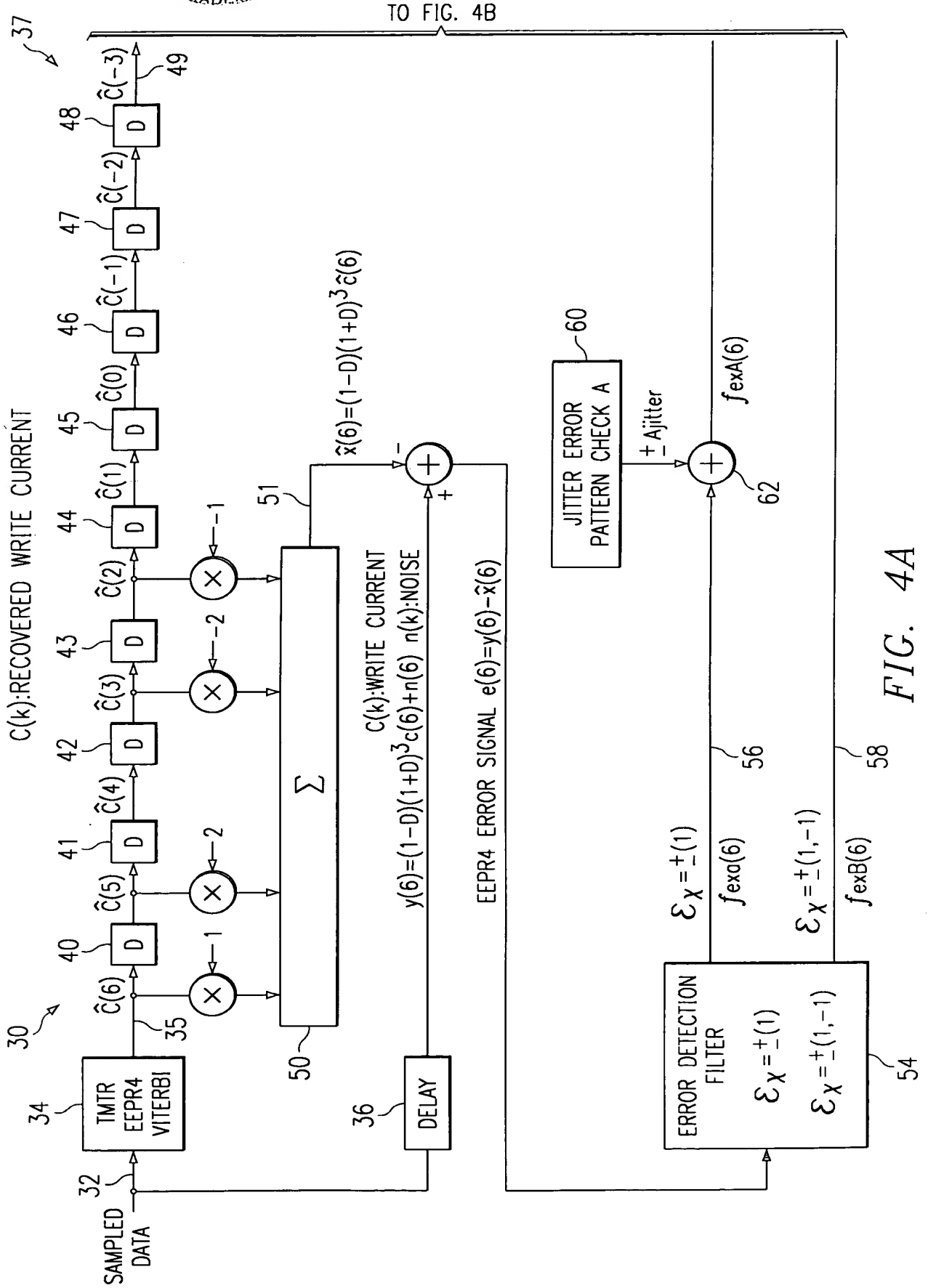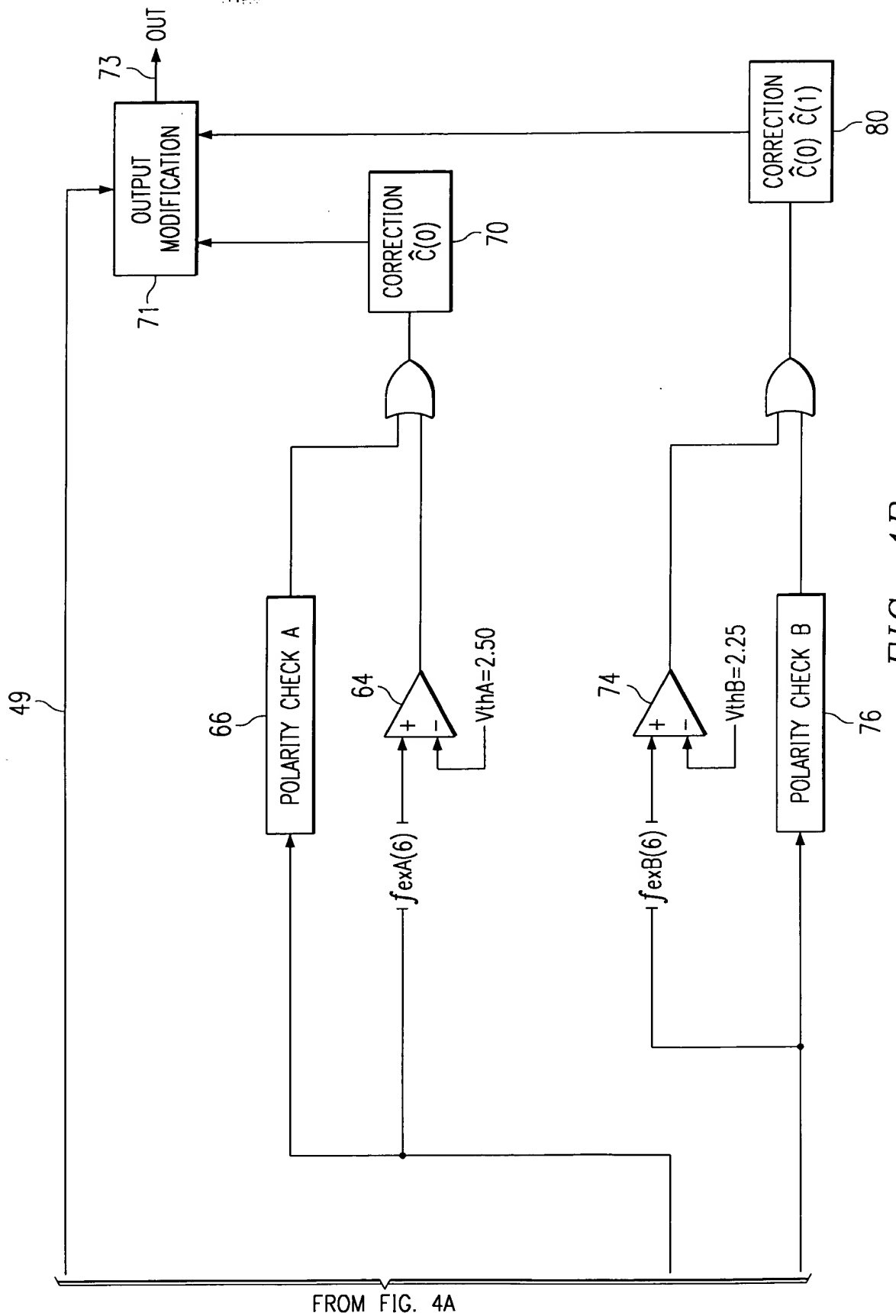
TURBO 16/17 EPR4 $\mathcal{E}_\chi = \overset{+}{\underset{-}{}}(1)$ DETECTOR WITH MEDIA NOISE CANCELLATION

$\hat{\chi}_1 \hat{\chi}_0 \hat{\chi}_{-1} = "1X1"$

$\hat{\chi}_1 \hat{\chi}_0 \hat{\chi}_{-1} = "0X0"$

$(1-D)(1+D)^2 x_{m+5} + e_{m+5}$

$(1-D)(1+D)^2 x_5 + e_5$

$e'_5 = (x_5 \hat{\chi}_5)(1-D)(1+D)^2 + e_5$
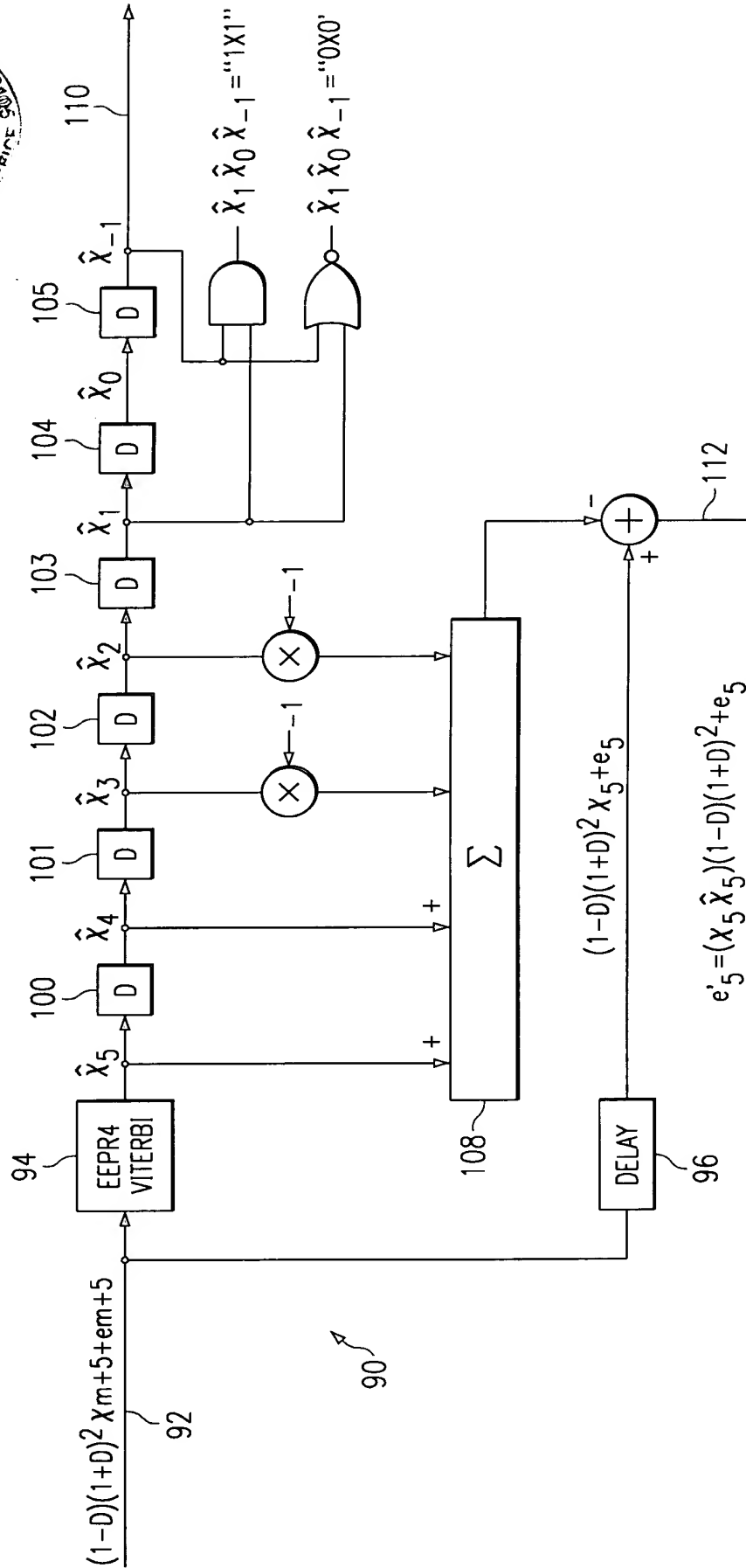
TO FIG. 5B

FIG. 5A

FIG. 5B
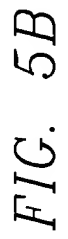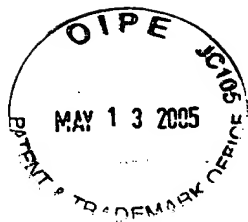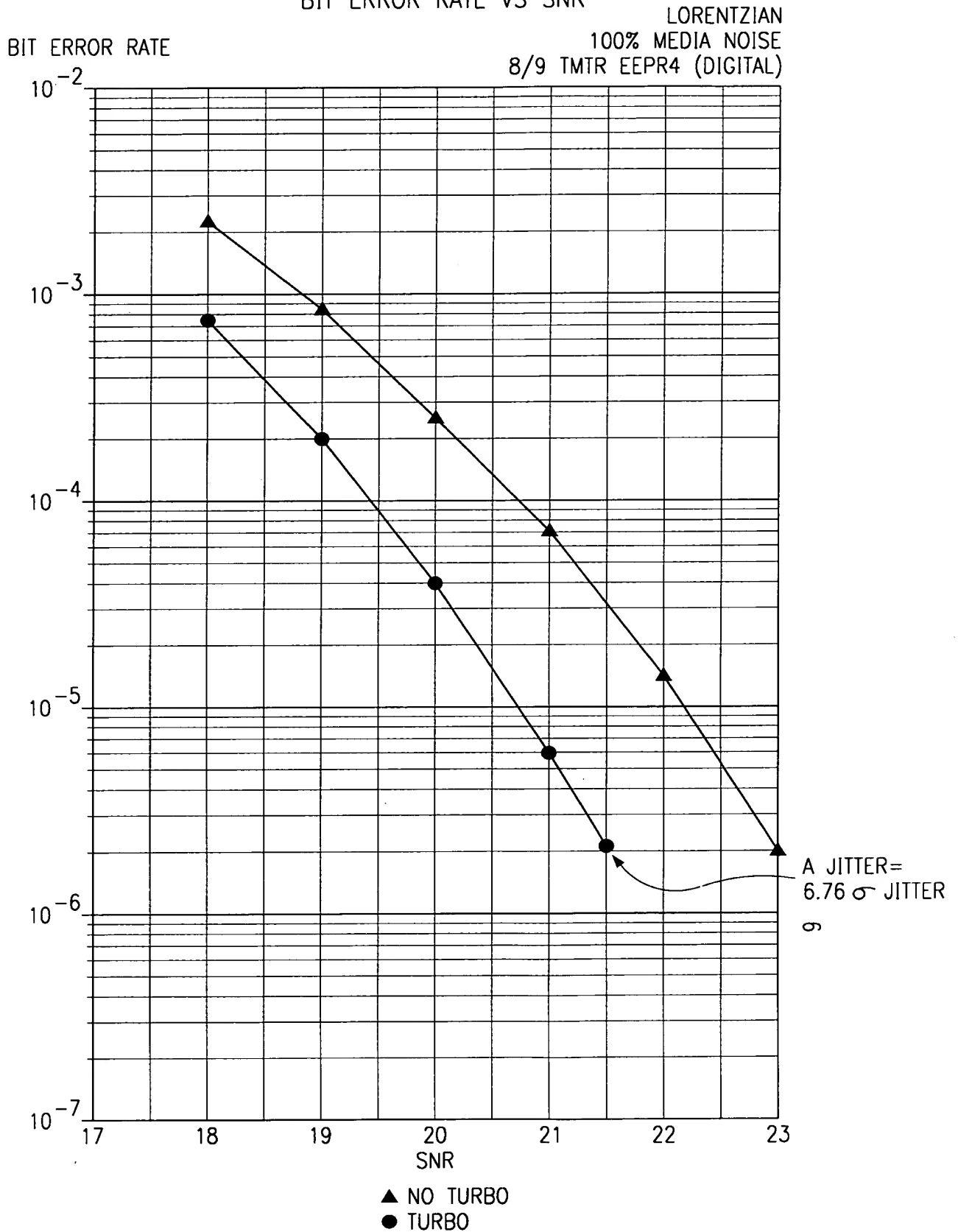
BIT ERROR RATE VS SNR

FIG. 6
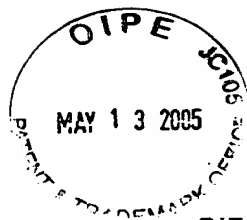
BIT ERROR RATE VS PEAK JITTER
100% MEDIA NOISE EPR4 CHANNEL

FIG. 7